

Work Order ID 164796

Monday, July 31, 2017 10:08:41 AM



164796

Ship 08-30

U/R

N.O.

Page 1

Item ID: D145-762-015

Accept

N900040100

Setup Start

NS1

Revision ID: URF 17-547

Item Name: Skidtube, Std Wearplates, DART (Apical) Tri-Bag Float Compatible, Fits LH or RH

Stop *NS2*

Start Date: 8/25/2017 Start Qty: 1.00

1

Cust Item ID:

Required Date: 8/30/2017 Req'd Qty: 1.00

1

Customer:

Reference:

Approvals: Process Plan:

Date:

JUL 31 2017

Tooling:

Date:

Run Start

NR1

QC:

Date:

SPC (Y/N):

Date:

Stop

NR2

Sequence ID/
Work Center ID

Operation
Description

Set Up/
Run Hours

Tool ID

Tool #

Plan
Code

Accept
Qty

Reject
Qty

Reject
Number

Insp.
Stamp

Draw Nbr

Revision Nbr

IIN-D117-762

E

DAS
6
9-89

AUG 14 2017

100

0.00

100

DOCUMENT CONTROL

DC

Memo

0.00

Doc.Control -USB or Paperwork

Photocopy bluefile & type labels per PPP D145-762-015 CHG002

CHG003 N.O.

DAS
28
9-89
SEP 05 2017

110

Pick Kit

0.00

110

Packaging

Memo

0.00

Packaging

1 AUG 15 2017 smB

SEP 07 2017

120

QC4- 100% Inspect kits for completeness

0.00

120

QC

Memo

0.00

Quality Control

DAS
28
9-89

SEP 07 2017

DART aerospace		1270 ABERDEEN ST. HAWKESBURY, ON, CANADA K9A 1K7 TEL: 1-613-632-5200 www.dartaero.com	
PATENT	US #5735484 / CA #2222184 / EURO #0828655		
P/N	D145-762-015	CHG	CHG002
DESC.	Float Skidtube	STC	SR01853SE
LOT	B164796	STC	
MODEL	BK117 C2	STC	

DQA: _____ Date: _____

WORK ORDER NON-CONFORMANCE / UPDATE



QA Closed: _____ Date: _____

Work Order update only ☐

Work Order: _____ Part No. _____ NCR No. _____	DISPOSITION Rework ☐ Scrap ☐ Use-as-is ☐ Suspected Unapproved ☐	AGAINST DEPARTMENT/PROCESS Skid-tube ☐ Machining ☐ Thermoforming ☐ Large Fab ☐ Cross tube ☐ Small Fab ☐ Finishing ☐ Composite ☐ Water Jet ☐ Prod. Eng. Coord. ☐ Rec/Store/Packaging ☐ Supplier ☐ Engineering ☐ Quality ☐ Other ☐			
Date :	Step #:	QTY Effective :		MRB (QSI042) Approval	
Description Work Order Deviation		Disposition		Completed By	
				Lead hand / Supervisor Approval Verification	
				QC / QA Coordinator Approval	
Root Cause Environment ☐ Design ☐ Doc/Data ☐ Equip/Tooling ☐ Handling/Pre ☐ Material ☐ Internal Transport ☐ Tribal Knowledge ☐ LOA ☐ Substation ☐ Past Expiry Date ☐ Misidentified ☐ No Re-verification ☐ Operator ☐ Offset/Setup ☐ Supplier ☐ Training ☐ Use for Testing ☐ Poor Information ☐ Rushing ☐ Product Improvement ☐ Process Improvement ☐ Manufacturing Process ☐ Past Due ☐		FAULT CATEGORY Pressure/Forced ☐ Bending ☐ Centre Not Concentric ☐ Cracks ☐ Crimp/Kink/Ripple/Wave ☐ Cuffs ☐ Crushing ☐ Heat Treat ☐ Wave/Twist in Tube ☐ Marks/Chatter ☐ Temperature/Cure ☐ Set-up ☐ BOM/Route ☐ Broken/Damage/Defect ☐ Inspection Incomplete/Unqualified ☐ Contamination ☐ Countersink ☐ Cut Too Short ☐ Instructions Incomplete/Unclear ☐ Drill Holes ☐ Power Loss/Surge ☐ Folio/Program ☐ Grain ☐ Weld ☐ Wrong Stock Pulled ☐ Out of Sequence ☐ Off-set ☐ Misabeled ☐ Fit/Function ☐ Misaligned/off center ☐ Positioned Wrong ☐ Outside Dimensions ☐ Over/Under tolerance ☐ Part Incorrect ☐ Part Lost/Missing ☐ Part Moved ☐ Drawing ☐ Finish ☐ Misread ☐ Turning Sequence ☐			
OTHER : ☐					

Work Order ID 164796

Monday, July 31, 2017 10:08:41 AM

164796

Page 2

Item ID: D145-762-015 **Accept** ***N900040100*** **Setup Start *NS1***
Revision ID: URF 17-547 **Stop *NS2***
Item Name: Skidtube, Std Wearplates, DART (Apical) Tri-Bag Float Compatible, Fits LH or RH
Start Date: 8/25/2017 **Start Qty:** 1.00 ***1*** **Cust Item ID:**
Required Date: 8/30/2017 **Req'd Qty:** 1.00 ***1*** **Customer:**
Reference:

Approvals: **Process Plan:** _____ **Date:** _____ **Tooling:** _____ **Date:** _____ **Run Start *NR1***
QC: _____ **Date:** _____ **SPC (Y/N):** _____ **Date:** _____ **Stop *NR2***

Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Tool ID	Tool #	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
130		0.00							
130	Packaging								
Packaging	Memo	0.00							
Packaging	Identify and pack for shipping as per PPP D145-762-015 Location: _____								
	Sold								
140		0.00							
140	QC21- Final Inspection - Work Order Release								
QC	Memo	0.00							
Quality Control									

POSITIVE RECALL

EFFECTIVE 17-08-01 **AUTH** N.O.

RELEASED 3 **DATE** 17-09-26

Drawing not ~~FAA~~ approved as per ECW 17-547

SmB
17/9/17

DAS
21
9-89 **SEP 07 2017**

DAS
21
9-89

SEP 07 2017

DQA: _____ Date: _____



WORK ORDER NON-CONFORMANCE / UPDATE

QA Closed: _____ Date: _____

Work Order update only ☐

Work Order: _____ Part No. _____ NCR No. _____		DISPOSITION Rework ☐ Scrap ☐ Use-as-is ☐ Suspected Unapproved ☐		AGAINST DEPARTMENT/PROCESS Skid-tube ☐ Machining ☐ Thermoforming ☐ Large Fab ☐ Cross tube ☐ Small Fab ☐ Finishing ☐ Composite ☐ Water Jet ☐ Prod. Eng. Coord. ☐ Rec/Store/Packaging ☐ Supplier ☐ Engineering ☐ Quality ☐ Other ☐					
Date :		Step #:		QTY Effective :			MRB (QSI042) Approval		
Description Work Order Deviation				Disposition				Completed By	
POSITIVE RECALL EFFECTIVE WITH RELEASED DATE								Lead hand / Supervisor Approval Verification	
								QC / QA Coordinator Approval	
Root Cause		FAULT CATEGORY							
Environment ☐ Design ☐ Doc/Data ☐ Equip/Tooling ☐ Handling/Pre ☐ Material ☐ Internal Transport ☐ Tribal Knowledge ☐ LOA ☐ Substation ☐ Past Expiry Date ☐ Misidentified ☐	No Re-verification ☐ Operator ☐ Offset/Setup ☐ Supplier ☐ Training ☐ Use for Testing ☐ Poor Information ☐ Rushing ☐ Product Improvement ☐ Process Improvement ☐ Manufacturing Process ☐ Past Due ☐	Pressure/Forced ☐ Bending ☐ Centre Not Concentric ☐ Cracks ☐ Crimp/Kink/Ripple/Wave ☐ Cuffs ☐ Crushing ☐ Heat Treat ☐ Wave/Twist in Tube ☐ Marks/Chatter ☐	Temperature/Cure ☐ Set-up ☐ BOM/Route ☐ Broken/Damage/Defect ☐ Inspection Incomplete/Unqualified ☐ Contamination ☐ Countersink ☐ Cut Too Short ☐ Instructions Incomplete/Unclear ☐ Drill Holes ☐	Power Loss/Surge ☐ Folio/Program ☐ Grain ☐ Weld ☐ Wrong Stock Pulled ☐ Out of Sequence ☐ Off-set ☐ Misabeled ☐ Fit/Function ☐ Misaligned/off center ☐	Positioned Wrong ☐ Outside Dimensions ☐ Over/Under tolerance ☐ Part Incorrect ☐ Part Lost/Missing ☐ Part Moved ☐ Drawing ☐ Finish ☐ Misread ☐ Turning Sequence ☐				
OTHER : ☐									

Picklist Print

Monday, July 31, 2017 10:08:40 AM

Page 1

Work Order ID: 164796

164796

Parent Item: D145-762-015

D145-762-015

Parent Item Name: Skidtube, Std Wearplates, DART (Apical) Tri-Bag Float Compatible, Fits LH or RH

Start Date: 8/25/2017

Required Date: 8/30/2017

Start Qty: 1.00

Required Qty: 1.00

Comments: IPP REV:A 13.04.24 NEW ISSUE DD VERF:JLM IPP
REV:B 16.02.05 IIN REV.E (ecn16-514) DD VERF:JLM

Component Item ID/ Item Name	Replacement Item ID	Mfg/ Purch	Bin Item	Primary Location	Last Location	Route Seq ID	Unit of Measure	Qty on Hand	Qty per Kit	Total Qty	Qty Issued	Date Issued	Status
---------------------------------	------------------------	---------------	-------------	---------------------	------------------	-----------------	--------------------	----------------	-------------	--------------	---------------	----------------	--------

D145-762-045

Manufactured No

110

Each

0.0000

1

1

**

164799

AUG 14 2017

D145-762-045

Replacement Float Skidtube

D145-762-055

Manufactured No

110

Each

0.0000

1

1

**

164797

AUG 14 2017

D145-762-055

Repl. Wearplates for Skidtubes, DART (Apical) Tri-Bag Float Comp., Fits LH or RH

AN6C52A

Purchased No

110

Each

13.0000

2

2

**

AN6C52A

BOLT

AUG 15 2017

Location

Loc Qty

Loc Code

ST333

13

m137490

13

D5300-1

Manufactured No

110

Each

0.0000

2

2

**

B163432

2

AUG 15 2017

D5300-1

GHL Bushing

D5301-1

Manufactured No

110

Each

12.0000

2

2

**

D5301-1

GHL Plug

AUG 15 2017

Location

Loc Qty

Loc Code

ST162

12

162337

12

2

DQA: _____ Date: _____



WORK ORDER NON-CONFORMANCE / UPDATE

QA Closed: _____ Date: _____

Work Order update only ☐

Work Order: _____ Part No. _____ NCR No. _____		DISPOSITION Rework ☐ Scrap ☐ Use-as-is ☐ Suspected Unapproved ☐		AGAINST DEPARTMENT/PROCESS Skid-tube ☐ Machining ☐ Thermoforming ☐ Large Fab ☐ Cross tube ☐ Small Fab ☐ Finishing ☐ Composite ☐ Water Jet ☐ Prod. Eng. Coord. ☐ Rec/Store/Packaging ☐ Supplier ☐ Engineering ☐ Quality ☐ Other ☐					
Date :		Step #:		QTY Effective :			MRB (QSI042) Approval		
Description Work Order Deviation				Disposition				Completed By Lead hand / Supervisor Approval Verification QC / QA Coordinator Approval	
Root Cause		FAULT CATEGORY							
Environment ☐	No Re-verification ☐	Pressure/Forced ☐	Temperature/Cure ☐	Power Loss/Surge ☐	Positioned Wrong ☐				
Design ☐	Operator ☐	Bending ☐	Set-up ☐	Folio/Program ☐	Outside Dimensions ☐				
Doc/Data ☐	Offset/Setup ☐	Centre Not Concentric ☐	BOM/Route ☐	Grain ☐	Over/Under tolerance ☐				
Equip/Tooling ☐	Supplier ☐	Cracks ☐	Broken/Damage/Defect ☐	Weld ☐	Part Incorrect ☐				
Handling/Pre ☐	Training ☐	Crimp/Kink/Ripple/Wave ☐	Inspection Incomplete/Unqualified ☐	Wrong Stock Pulled ☐	Part Lost/Missing ☐				
Material ☐	Use for Testing ☐	Cuffs ☐	Contamination ☐	Out of Sequence ☐	Part Moved ☐				
Internal Transport ☐	Poor Information ☐	Crushing ☐	Countersink ☐	Off-set ☐	Drawing ☐				
Tribal Knowledge ☐	Rushing ☐	Heat Treat ☐	Cut Too Short ☐	Mislabeled ☐	Finish ☐				
LOA ☐	Product Improvement ☐	Wave/Twist in Tube ☐	Instructions Incomplete/Unclear ☐	Fit/Function ☐	Misread ☐				
Substation ☐	Process Improvement ☐	Marks/Chatter ☐	Drill Holes ☐	Misaligned/off center ☐	Turning Sequence ☐				
Past Expiry Date ☐	Manufacturing Process ☐								
Misidentified ☐	Past Due ☐	OTHER :							

Picklist Print

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Page 2

Work Order ID: 164796

164796

Parent Item: D145-762-015

D145-762-015

Parent Item Name: Skidtube, Std Wearplates, DART (Apical) Tri-Bag Float Compatible, Fits LH or RH

Start Date: 8/25/2017

Required Date: 8/30/2017

MS21043-6

Purchased

No

110

Each

126.0000

Start Qty: 1.00

2

2

Required Qty: 1.00

MS21043-6

NUT

**

AUG 15 2017

DAS
28
8-89

Location

Loc Qty

Loc Code

FG	20
103693	20
FP001	46
m135470	2
m137963	44
OVER007	30
m138040	30
ST302	30
<u>m137479</u>	30

2

DAS
27
9-89

DQA: _____ Date: _____



WORK ORDER NON-CONFORMANCE / UPDATE

QA Closed: _____ Date: _____

Work Order update only ☐

Work Order: _____ Part No. _____ NCR No. _____		DISPOSITION Rework ☐ Scrap ☐ Use-as-is ☐ Suspected Unapproved ☐		AGAINST DEPARTMENT/PROCESS Skid-tube ☐ Machining ☐ Thermoforming ☐ Large Fab ☐ Cross tube ☐ Small Fab ☐ Finishing ☐ Composite ☐ Water Jet ☐ Prod. Eng. Coord. ☐ Rec/Store/Packaging ☐ Supplier ☐ Engineering ☐ Quality ☐ Other ☐					
Date: _____		Step #: _____		QTY Effective: _____			MRB (QSI042) Approval Completed By Lead hand / Supervisor Approval Verification QC / QA Coordinator Approval		
Description Work Order Deviation				Disposition					

Root Cause				FAULT CATEGORY																																																											
Environment ☐	Design ☐	Doc/Data ☐	Equip/Tooling ☐	Handling/Pre ☐	Material ☐	Internal Transport ☐	Tribal Knowledge ☐	LOA ☐	Substation ☐	Past Expiry Date ☐	Misidentified ☐	No Re-verification ☐	Operator ☐	Offset/Setup ☐	Supplier ☐	Training ☐	Use for Testing ☐	Poor Information ☐	Rushing ☐	Product Improvement ☐	Process Improvement ☐	Manufacturing Process ☐	Past Due ☐	Pressure/Forced ☐	Bending ☐	Centre Not Concentric ☐	Cracks ☐	Crimp/Kink/Ripple/Wave ☐	Cuffs ☐	Crushing ☐	Heat Treat ☐	Wave/Twist in Tube ☐	Marks/Chatter ☐	Temperature/Cure ☐	Set-up ☐	BOM/Route ☐	Broken/Damage/Defect ☐	Inspection Incomplete/Unqualified ☐	Contamination ☐	Countersink ☐	Cut Too Short ☐	Instructions Incomplete/Unclear ☐	Drill Holes ☐	Power Loss/Surge ☐	Folio/Program ☐	Grain ☐	Weld ☐	Wrong Stock Pulled ☐	Out of Sequence ☐	Off-set ☐	Mislabeled ☐	Fit/Function ☐	Misaligned/off center ☐	Positioned Wrong ☐	Outside Dimensions ☐	Over/Under tolerance ☐	Part Incorrect ☐	Part Lost/Missing ☐	Part Moved ☐	Drawing ☐	Finish ☐	Misread ☐	Turning Sequence ☐
																								OTHER : _____																																							

Work Order ID 164796

Monday, July 31, 2017 10:08:41 AM

164796

Page 1

Item ID: D145-762-015
 Revision ID: URF 17-547
 Item Name: Skidtube, Std Wearplates, DART (Apical) Tri-Bag Float Compatible, Fits LH or RH

Accept

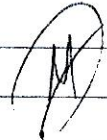
N900040100

Setup Start ***NS1***
 Stop ***NS2***

Start Date: 8/25/2017 Start Qty: 1.00 ***1***
 Required Date: 8/30/2017 Req'd Qty: 1.00 ***1***

Cust Item ID:
 Customer:

Reference:

Approvals: Process Plan:  Date: JUL 31 2017
 QC: Date:

Tooling: Date:
 SPC (Y/N): Date:

Run Start ***NR1***
 Stop ***NR2***

Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Tool ID	Tool #	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
Draw Nbr	Revision Nbr								
IIN-D117-762	E								
100		0.00							
100	DOCUMENT CONTROL								
DC	Memo	0.00							
Doc.Control -USB or Paperwork	Photocopy bluefile & type labels per PPP D145-762-015 CHG002								
110	Pick Kit	0.00							
110									
Packaging	Memo	0.00							
Packaging									
120	QC4- 100% Inspect kits for completeness	0.00							
120									
QC	Memo	0.00							
Quality Control									

DAS
 5
 8-89

AUG 1 8 2017

5.3 D145-762-015/-115 Skidtube Parts List

Item	Qty -015	Qty -045	Qty -055	Qty -115	Qty -155	Part Number	Description
	X					D145-762-015	FLOAT SKIDTUBE WITH STD WEARPLATES
	1	X		1		D145-762-045	REPLACEMENT FLOAT SKIDTUBE
	1		X			D145-762-055	REPLACEMENT WEARPLATES (FLOAT SKIDTUBES)
				X		D145-762-115	FLOAT SKIDTUBE WITH TRAINING WEARPLATES
				1	X	D145-762-155	REPLACEMENT TRAINING WEARPLATES (FLOAT SKIDTUBE)
201		1				D4766-041	SKIDTUBE ASSEMBLY
202	2			2		**L321M1024101 OR **B321M1026101	SKID SHOE (REF ONLY)
203	8			8		**BRSP96/25-SK-W5-1 TEILIG OR **BRSP98/25-SK-W5-1 TEILIG OR **01618266098	CLAMP (REF ONLY)
204	8			8		**N/A	OEM BOLT (REF ONLY)
205	8			8		**N/A	OEM LOCKING WASHER (REF ONLY)
206	8			8		**N/A	OEM WASHER (REF ONLY)
210A		1				*D2965	CAP
210B		1				*D2965-3	CAP
211		4				***AELS-1032-225	INSERT
212		2				*AN3C5A	BOLT
213		2				*NAS1149C0332R	WASHER (OR AN960C10L)
214		2				*AN526C1032	SCREW
220A			1			D4682-041	WEARPLATE
220B			1			D4682-045	WEARPLATE
220C			1			D4682-11	WEARPLATE
221A					1	D4769-041	WEARPLATE
221B					1	D4772-041	WEARPLATE
221C					1	D4771-041	WEARPLATE
222			6		6	D4764-1	BUSHING
223			12		12	D4764-5	BUSHING
224			1		1	AN4C42A	BOLT
225			2		2	AN4C43A	BOLT
226			2		2	AN6C44A	BOLT
227			4		4	AN6C45A	BOLT
228			3		3	MS21043-4	NUT
229			6		6	MS21043-6	NUT
230		3				*AELS-1032-130	INSERT
231		3				*AN3C4A	BOLT
232		3				*NAS1149C0332R	WASHER (OR AN960C10L)
250	2				2	AN6C52A	BOLT
251	2				2	D5300-1	GHL BUSHING
252	2				2	D5301-1	GHL PLUG
253	2				2	MS21043-6	NUT

* PART IS INCLUDED WITH D4766-041 STD SKIDTUBE ASSEMBLY

** TO BE SUPPLIED BY CUSTOMER, LISTED AS REFERENCE ONLY

*** DENOTES PART IS INCLUDED WITH ASSEMBLY ABOVE

PAGE 1 OF 1

Description: FLOAT SKIDTUBE w/ STD WEARPLATES

H:\Forms\Engineer\Approved Eng Online\CHGREC revB

DQA: _____ Date: _____



WORK ORDER NON-CONFORMANCE / UPDATE

QA Closed: _____ Date: _____

Work Order update only ☐

Work Order: _____ Part No. _____ NCR No. _____		DISPOSITION Rework ☐ Scrap ☐ Use-as-is ☐ Suspected Unapproved ☐		AGAINST DEPARTMENT/PROCESS Skid-tube ☐ Machining ☐ Thermoforming ☐ Large Fab ☐ Cross tube ☐ Small Fab ☐ Finishing ☐ Composite ☐ Water Jet ☐ Prod. Eng. Coord. ☐ Rec/Store/Packaging ☐ Supplier ☐ Engineering ☐ Quality ☐ Other ☐					
Date :		Step #:		QTY Effective :				MRB (QSI042) Approval Completed By _____ Lead hand / Supervisor Approval Verification _____ QC / QA Coordinator Approval _____	
Description Work Order Deviation				Disposition					
Root Cause Environment ☐ Design ☐ Doc/Data ☐ Equip/Tooling ☐ Handling/Pre ☐ Material ☐ Internal Transport ☐ Tribal Knowledge ☐ LOA ☐ Substation ☐ Past Expiry Date ☐ Misidentified ☐ No Re-verification ☐ Operator ☐ Offset/Setup ☐ Supplier ☐ Training ☐ Use for Testing ☐ Poor Information ☐ Rushing ☐ Product Improvement ☐ Process Improvement ☐ Manufacturing Process ☐ Past Due ☐		FAULT CATEGORY Pressure/Forced ☐ Bending ☐ Centre Not Concentric ☐ Cracks ☐ Crimp/Kink/Ripple/Wave ☐ Cuffs ☐ Crushing ☐ Heat Treat ☐ Wave/Twist in Tube ☐ Marks/Chatter ☐ Temperature/Cure ☐ Set-up ☐ BOM/Route ☐ Broken/Damage/Defect ☐ Inspection Incomplete/Unqualified ☐ Contamination ☐ Countersink ☐ Cut Too Short ☐ Instructions Incomplete/Unclear ☐ Drill Holes ☐ Power Loss/Surge ☐ Folio/Program ☐ Grain ☐ Weld ☐ Wrong Stock Pulled ☐ Out of Sequence ☐ Off-set ☐ Misabeled ☐ Fit/Function ☐ Misaligned/off center ☐ Positioned Wrong ☐ Outside Dimensions ☐ Over/Under tolerance ☐ Part Incorrect ☐ Part Lost/Missing ☐ Part Moved ☐ Drawing ☐ Finish ☐ Misread ☐ Turning Sequence ☐							
		OTHER : ☐							